

ABSTRACT OF THE DISCLOSURE

The airborne radio relay system includes a network control station, at least one ground station, airborne cluster controller relay stations, and one or more non-airborne stations, which may be mobile. The network control station accesses a database providing real-time four dimensional position information regarding air stations in the national and international airspace, and dynamically designates and redesignates particular airborne stations to repeat traffic in response to changing air traffic patterns so that concentric rings of overlapping relay stations are maintained. Transmitting stations use time division duplex techniques to transfer traffic, which includes packet switched data communications traffic.